

REMARKS/ARGUMENTS

Applicant has carefully reviewed and considered the Final Office Action mailed on May 17, 2007, and the references cited therewith.

No claims are amended, canceled, or added. Claims 2-5, 8-9, 12-13, and 6-57 are withdrawn from consideration. As a result, claims 1, 6-7, 10-11, and 14-15 are now pending in this application.

§ 103 Rejection of the Claims

Claims 1, 6-7, 10-11 and 14-15 were rejected under 35 USC § 103(a) as being unpatentable over Masashi et al. (JP No. 2002-076356) (previously applied) in view of Ishihara et al. (U.S. Pub. No. 2004/0116617) (previously applied). Applicant respectfully traverses the rejection as follows.

As presented in the Response to the November 20, 2006, first Office Action, Applicant's independent claim 1, as previously presented, presently recites, "a channel contacting the drain electrode and the source electrode, wherein the channel includes one or more of a metal oxide including zinc-germanium, zinc-lead, cadmium-germanium, cadmium-tin, cadmium-lead".

The Examiner acknowledged in the November 20, 2006, first Office Action that "Masashi et al. do not explicitly disclose that the transition-metals element are germanium, lead, cadmium, tin or lead." Applicant respectfully noted in the response to the Office Action that paragraph 0041 of the Masashi reference only describes ZnO as an "ingredient of each component". Masashi remarks that five group III elements (i.e., B, Al, Ga, In, and Tl) and four group VII elements (i.e., F, Cl, Br, and I) as possible dopants for n form ZnO, and five group I elements (i.e., Li, Na, K, Rb, and Cs) and five group V elements (i.e., N, P, As, Sb, and Bi) as possible dopants for p form ZnO. The reference concludes the list of possibilities for dopants of n and p form ZnO with "and doped 3 mored transition-metals element."

Applicant respectfully submitted that the quoted phrase from Masashi is incomprehensible and, thus, does not describe, teach, or suggest anything that can be appreciated by one of ordinary skill in the relevant art. Applicant respectfully submitted that even if the quoted phrase were interpreted to mean that three more transition-metals can be used to dope ZnO, stating that three more elements can be used is vague and open-ended after already providing specific examples of nineteen elements that can be used as dopants. Hence, Masashi does not describe, teach, or suggest any of the elements (i.e., Ge, Pb, Cd, and Sn) that are combined with Zn, and/or combined with each other, recited in Applicant's independent claim 1, as previously presented.

From Applicant's review of the Ishihara reference, the reference does not describe, teach, or suggest "a channel contacting the drain electrode and the source electrode," wherein the channel includes one or more of a metal oxide", as recited in Applicant's independent claim 1, as previously provided. Applicant respectfully submits that the description provided in the Ishihara reference is unrelated to a "Semiconductor Device", which is the title of the present application. Hence, Applicant respectfully submits that the Ishihara reference is non-analogous art and should not be used as a basis for a 103 rejection of Applicant's claims, as detailed below.

The Ishihara reference appears to describe, "a solid acid catalyst that is excellent from the point of toxicity, environment and others, wherein reaction can be progressed effectively with Bronsted acid or Lewis acid catalyst." (Abstract). Ishihara appears to go on to describe, "an acid catalyst comprising a metallic salt of tris(perfluoroalkylsulfonyl)methide shown by the formula $[(RfSO_2)_3C]_nM_2$ ". (Paragraph 0008). As described in the same paragraph, Rf appears to represent a perfluoroalkyl group having one or more carbon atoms. The M_2 component of the formula appears to represent an element selected from alkaline metals, earth metals, and transition metals that, among ten others, include Zn, Ge, Pb, Cd, and Sn.

Firstly, Applicant respectfully submits that the references are non-analogous art, per MPEP 2141.01(a). Applicant respectfully notes that MPEP 2141.01(a) in Section III provides examples of Analogy In The Chemical Arts and in Section V provides

examples of Analogy In The Electrical Arts. Applicant submits that the Ishihara reference describes material relating to the chemical arts and that the present application discloses material relating to the electrical arts. Applicant notes no examples in MPEP 2141.01(a) of analogy crossing over from the chemical arts to the electrical arts. As such, the Ishihara reference does not appear to be “in the field of applicant’s endeavor”, per MPEP 2141.01(a).

Moreover, Applicant respectfully submits that the Ishihara reference describes “an acid catalyst comprising a metallic salt”, or a perfluoroalkyl group having one or more carbon atoms. In contrast, the present application discloses “a channel contacting the drain electrode and the source electrode, wherein the channel includes one or more of a metal oxide”. As such, the Ishihara reference does not appear to be “reasonably pertinent to the particular problem” dealt with in the present application, per MPEP 2141.01(a). Hence, for the reasons just presented, Applicant respectfully submits that the Ishihara reference is not analogous art and should not be used as a basis for a 103 rejection of Applicant’s claims.

Secondly, Applicant respectfully submits that the references do not “suggest the desirability of the claimed invention”, per MPEP 2143.01. As presented above, Applicant respectfully submits that the Ishihara reference is not “in the field of applicant’s endeavor” and that the Ishihara reference does not appear to be “reasonably pertinent to the particular problem” dealt with in the present application. That is, Applicant respectfully submits that the Ishihara reference not being “in the field of applicant’s endeavor” and not being “reasonably pertinent to the particular problem” removes the prima facie “motivation” to combine teachings of the Ishihara reference with teachings of the Masashi reference.

As such, Applicant respectfully submits that the Ishihara reference is not analogous art and that the reference does not “suggest the desirability of the claimed invention” of the present application by providing “some teaching, suggestion, or motivation” for “combining or modifying the teachings of the prior art to produce the claimed invention”, per MPEP 2143.01. Hence, Applicant respectfully submits that the

Ishihara reference should not be used to establish obviousness and, thus, should not be used as a basis for a 103 rejection of Applicant's claims.

Thirdly, Applicant respectfully submits the reference does not describe "art recognized suitability for an intended purpose", per MPEP 2144.07. As presented above, the Ishihara reference appears to describe, "a solid acid catalyst that is excellent from the point of toxicity, environment and others, wherein reaction can be progressed effectively with Bronsted acid or Lewis acid catalyst." (Abstract). In contrast, Applicant's independent claim 1, as previously presented, recites, "a channel contacting the drain electrode and the source electrode, wherein the channel includes one or more of a metal oxide".

Applicant respectfully submits that a "reasonable expectation of success" is required before using contents of a particular reference as a basis for a 103 obviousness rejection. That is, the Ishihara reference describing "an acid catalyst comprising a metallic salt of tris(perfluoroalkylsulfonyl)methide shown by the formula $[(RfSO_2)_3C]_nM_2$ " where the M_2 component of the formula appears to represent an element selected from metals that, among ten others, include Zn, Ge, Pb, Cd, and Sn does not provide a "reasonable expectation of success" in using Zn, Ge, Pb, Cd, and Sn in embodiments of a semiconductor device, as recited in the present application.

Applicant respectfully submits that the Examiner is using the claims of present application as a template for finding the separate elements of the claims in references usable as prior art, which appears to be "impermissible hindsight". Applicant respectfully requests that the Examiner explain how Zn, Ge, Pb, Cd, and Sn appearing in the Ishihara reference provides any more "reasonable expectation of success" of using them in a semiconductor device than the listing of such elements in the periodic table of elements.

Applicant respectfully submits that any chemical compound described in the Ishihara reference as a "solid acid catalyst" cannot be selected based on its suitability for its intended use when used for "a channel contacting the drain electrode and the source electrode" in a semiconductor device, per MPEP 2144.07. Hence, Applicant

respectfully submits that the Ishihara reference should not be used to support an obviousness determination and, thus, should not be used as a basis for a 103 rejection of Applicant's claims.

Applicant respectfully notes that the Examiner did not appear to address any of the above arguments related to the Ishihara reference, including: 1) the reference being "non-analogous art" that is not "in the field of applicant's endeavor", per MPEP 2141.01(a); 2) being a reference that does not "suggest the desirability of the claimed invention" by providing "some teaching, suggestion, or motivation" for "combining or modifying the teachings of the prior art to produce the claimed invention", per MPEP 2143.01; and 3) the reference does not describe "art recognized suitability for an intended purpose", per MPEP 2144.07.

As such, Applicant respectfully submits that each and every element and limitation of independent claim 1, as previously presented, is not described, taught, or suggested by the Masashi and Ishihara references, either individually or in combination. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the 103 rejection of independent claim 1, as previously presented, as well as those claims that depend therefrom.

CONCLUSION

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney Timothy F. Myers at (541) 715-4197.

At any time during the pendency of this application, please charge any additional fees or credit overpayment to the Deposit Account No. 08-2025.

CERTIFICATE UNDER 37 CFR §1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS AF Commissioner for Patents, P.O. BOX 1450 Alexandria, VA 22313-1450, on this 29th day of June, 2007.

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